



Averages from Frequency Tables Exam Practice

Q1. The table below shows the number of books people who visit a local library borrowed on Sunday.

Number of books borrowed	Frequency
1	3
2	6
3	5
4	2
5	2

a) On Sunday, what was the number of people who left the library having borrowed more than 3 books?

(1 mark)

b) Work out the mean number of books borrowed from the library.

(2 marks)

Q2. The table below shows the number of points scored by a 5-a-side football team in various different games.

Number of Points	Frequency
1	8
2	11
3	7
4	6
Over 4	0

a) In how many games did the team score more than 2 points?

(1 mark)

b) Work out the mean number of points scored by the team.

(2 marks)

c) State the modal number of points scored by the team.

(1 mark)

d) Work out the median number of points scored by the team. You must show all your working out.

(2 marks)



Q3. Packets of sweets contain toffees and several other types of sweets. The following table shows the number of toffees in a sample of packets.

No. of Toffees	No. of Packets
6	15
7	18
8	x
9	11

- a) If the total number of toffees in the sample of packets is 419, find x .
(1 mark)
- b) Work out the mean number of toffees per packet.
(2 marks)
- c) If the sample contained 600 packets of sweets, estimate the total number of toffees there were be in total. You must show your working.
(2 marks)

Q4. The heights of trees in a forest are recorded in the following table.

Height h of tree (metres)	Frequency (to the nearest 10)
$2 \leq h < 2.5$	200
$2.5 \leq h < 3$	350
$3 \leq h < 3.5$	420
$3.5 \leq h < 4$	160
$4 \leq h < 6$	80

- a) Work out an estimate for the mean height of trees in the forest.
(3 marks)
- b) Give reasons why your estimate in part (a) is only an estimate.
(2 marks)
- c) State the modal class for the data.
(1 mark)
- d) Estimate the number of trees which have a height between 3m and 5m
(2 marks)



Q5. The times of some runners to complete a 5 km race are recorded in the following table.

Time t of (minutes)	No. of runners
$15 \leq t < 18$	18
$18 \leq t < 21$	37
$21 \leq t < 25$	26
$25 \leq t < 30$	23
$30 \leq t < 50$	21
$t \geq 50$	0

- a) Work out an estimate for the mean time of a runner in the race. (3 marks)
- b) Give a reason why your estimate in part (a) is only an estimate. (1 mark)
- c) (i) Which class contains the median? You must show your working. (2 marks)
- (ii) Hence estimate the median time of the runners. (2 marks)

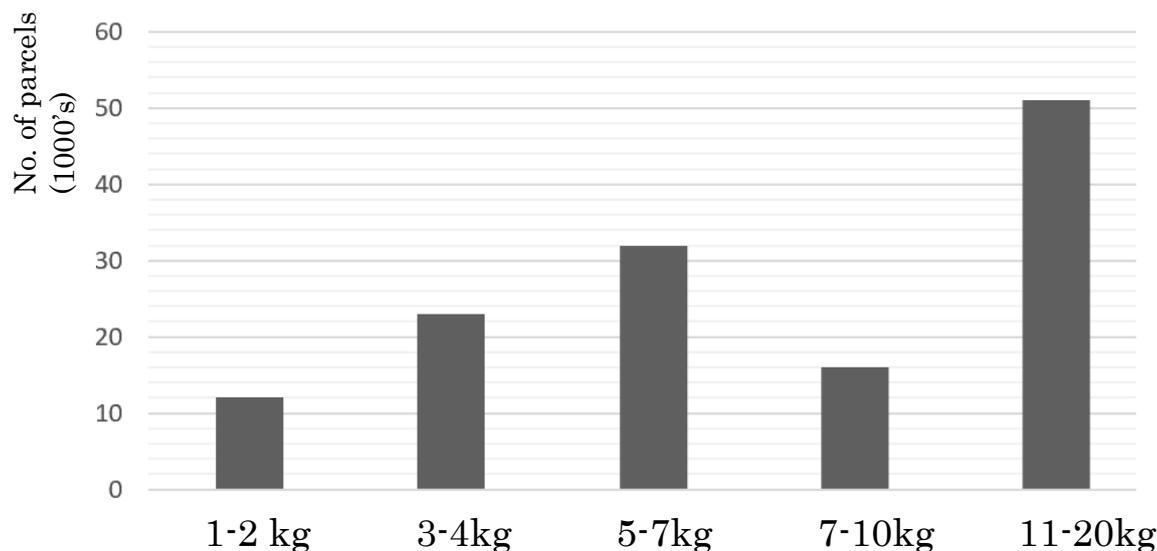
Q6. Here are the weights of several pumpkins entered into a village fruit 'n' veg growing competition. The heaviest pumpkin is the winner.

310g 355g 529g 604g 818g 1.21kg 1.35kg 1.40kg
1.55kg 1.59kg 1.73kg 1.92kg 2.05kg 2.28kg 2.28kg 2.49kg
2.87kg 2.92kg 2.99kg 3.02kg 3.13kg 3.78kg 4.33kg 4.84kg

- a) State the mode of the data. (1 mark)
- b) Present the data in a frequency table, using 5 classes of equal widths. (2 marks)
- c) Use your frequency table to work out an estimate for the mean weight of a pumpkin. (3 marks)
- d) One regular contestant says, "None of the pumpkins this year weighed as much as the winning pumpkin from last year". Does this mean that the mean weight of the pumpkins was lower this year than last year? You must explain your reasoning. (1 mark)

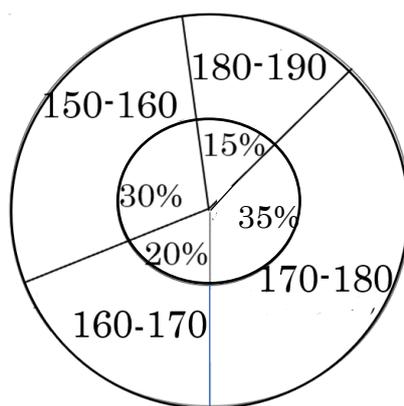


Q7. The following bar chart shows the amount of parcels, by weight, (kg) received at a main post office branch in a year.



- a) Present the above data in the form of a frequency table, and use your table to work out an estimate for the mean weight of a parcel. Give your answer to the nearest kg. (4 marks)
- b) Estimate the number of parcels weighing between 3kg and 6 kg which the post office will process in a day. (2 marks)

Q8. The following pie chart shows the proportion of 3000 people of different heights (in cm).



Present the above data in the form of a frequency table, and use your table to work out an estimate for the mean height of a person. Give your answer to the nearest cm.

(4 marks)